

RDF – an alternative encoding for INSPIRE data?

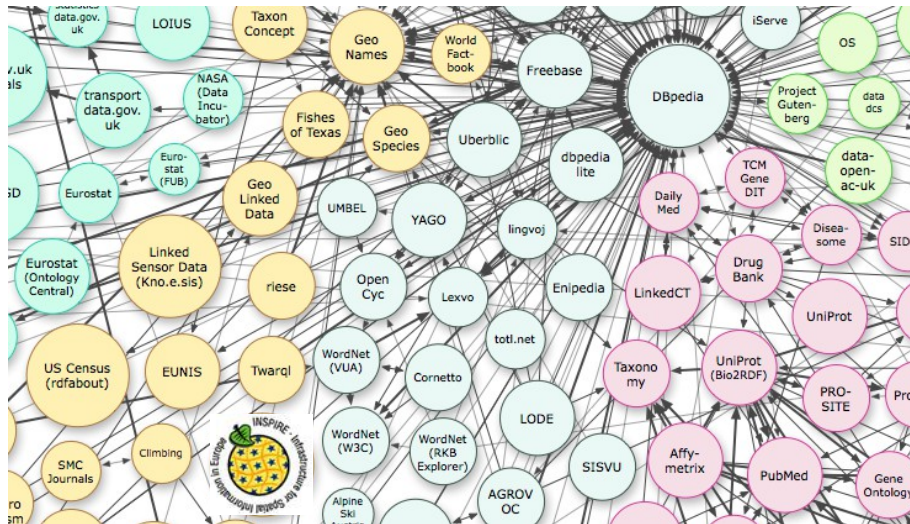
Michael Lutz

Geodata on the Web Conference

Amerfoort, 10 February 2016

www.jrc.ec.europa.eu

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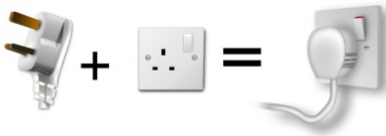


Content

- INSPIRE in a nutshell
- Why another encoding?
- The ARE3NA RDF guidelines and pilots

INSPIRE in a nutshell

- INSPIRE provides a comprehensive framework for interoperability of spatial data
 - Inventory (monitoring of implementation)
 - data & service sharing
 - data & service discovery / metadata
 - network services
 - interoperability



- INSPIRE data can be combined with other data to enable cross-sector & cross-border “location-aware” analyses

Key pillars of data interoperability

Conceptual data models

- spatial objects and their properties and relationships for 34 data themes
- cross-domain harmonization
- based on a common modelling framework
- managed in a common UML repository

Encoding

- GML application schemas as standard encoding
- conceptual models independent of concrete encodings
- also possible to derive other encodings (e.g. based on RDF)

Harmonised vocabularies

- to overcome interoperability issues caused by free-text and/or multi-lingual content
- allow more specific terms from local vocabularies in addition to the harmonized terms

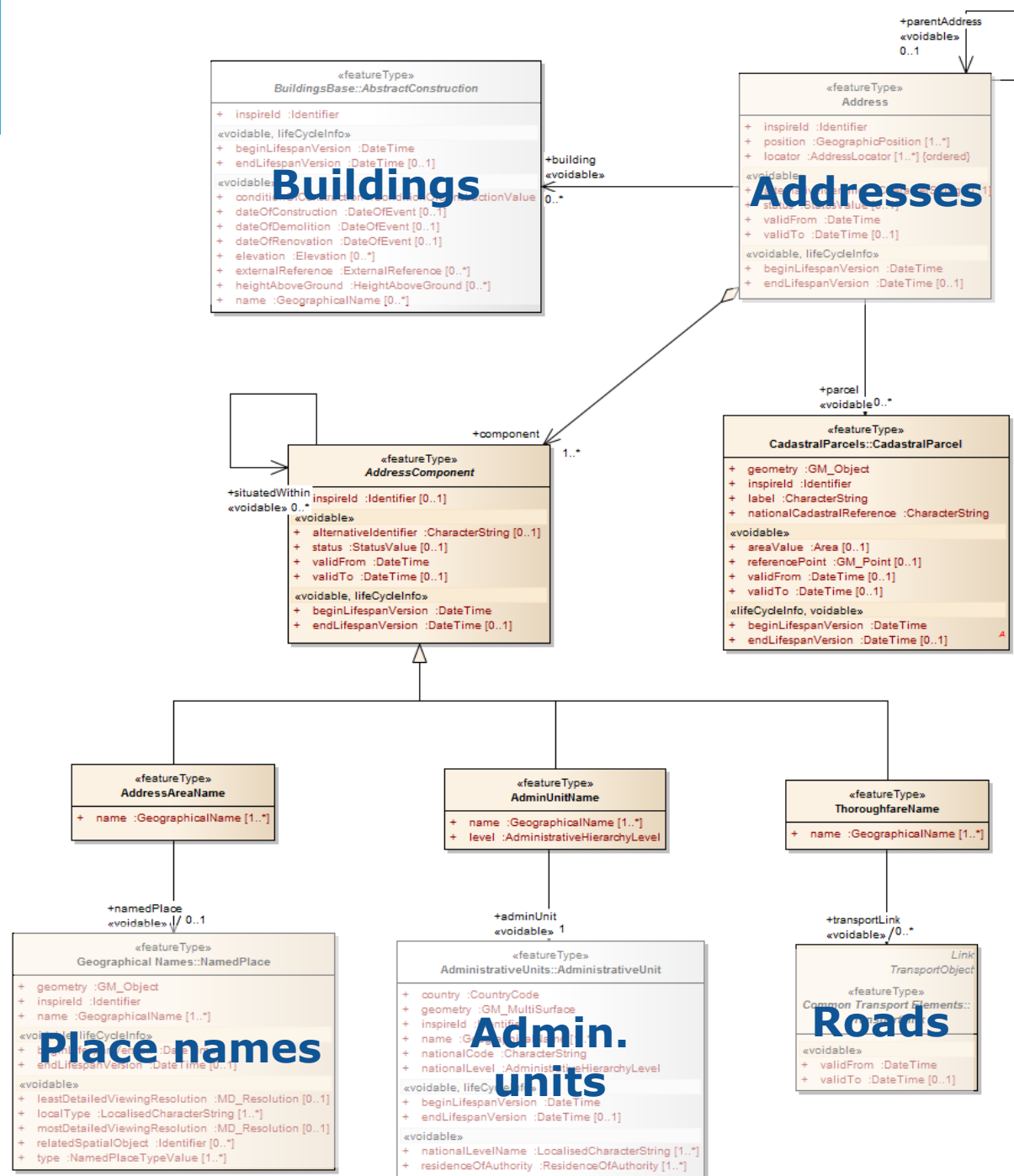
Registers

- provide unique and persistent identifiers for resources
- allow their consistent management and versioning
- items can be made unique and referred to unambiguously

Data models

Conceptual data models

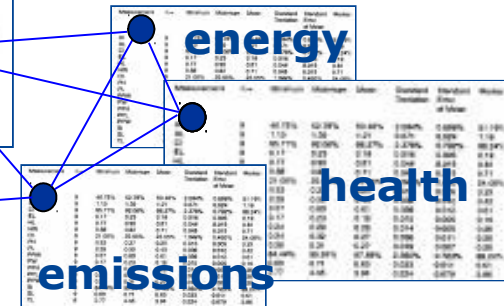
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Cross-sector/-border interoperability



Data from other sectors



Smart cities

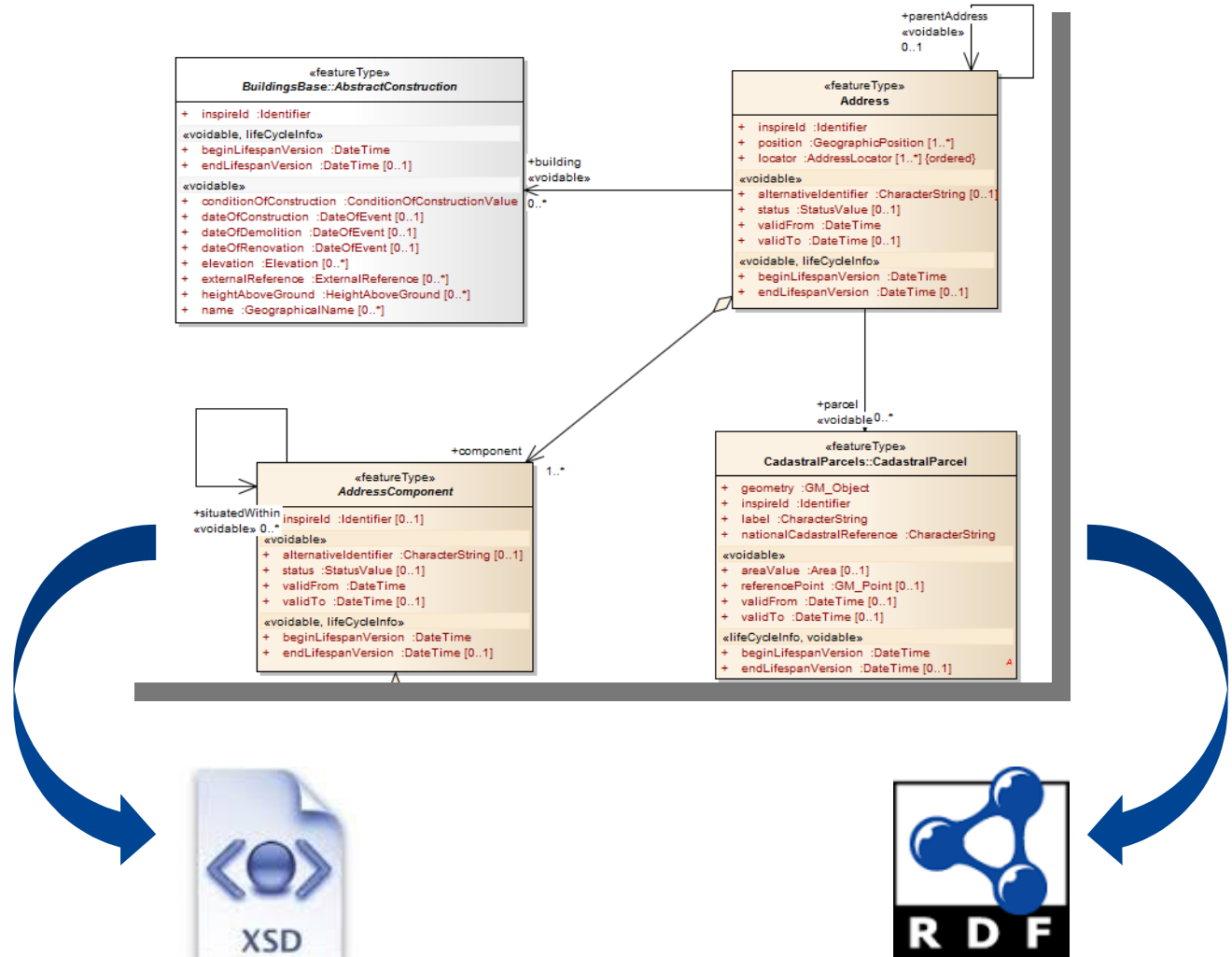
Environmental Impact Assessment

Risk Management

Encoding rules

Encoding

- GML application schemas as standard encoding
- conceptual models independent of concrete encodings
- also possible to derive other encodings (e.g. based on RDF)



ARe³NA

A Reusable INSPIRE Reference Platform



Interoperability



Openness



Reuse



Collaboration

... sharing reusable components for **INSPIRE** implementation and interoperability in cross-border/cross-sector contexts

ARE3NA work on INSPIRE as Linked Data

Objectives

- Improve the guidelines for publishing INSPIRE data in RDF
- Elaborate the value propositions of geospatial data as linked open data

Guidelines

Draft **methodology** and **vocabularies** for refinement of the guidelines

Feasibility and benefits of representing INSPIRE in RDF

Document **issues** related to methodology and vocabularies

Pilots

Update guidelines following results of the pilots

2 Pilots



Guidelines

Pilots – Tell us more about ...



Tools: Are you planning to use [existing software](#) tools for the implementation of the pilot that other organisations could use in similar activities?



Data: Are you planning to reuse [existing vocabularies](#)? Which [INSPIRE data](#) would the pilot use? Are there any [access](#) or [licensing](#) restrictions to the data?



Use cases: Which [problems](#) will the pilot address? What is the [policy](#) context? Which [challenges](#) do you foresee? Who is your target [audience](#)? What [added value](#) would the pilot bring?



Data consumers: What are the [benefits](#) of using RDF/Linked Data for the consumers? What are their specific [data requirements](#)? Which [other parties](#) would be involved in the pilot?

Guidelines

- Build on the results of a previous ARE3NA project (2014)
- Focus on open issues
- Consider new input
- Goal is a draft for a new encoding rule for INSPIRE data, ready for stakeholder review
- Scope focused on themes used in pilots

ISA Action 1.17: A Reusable INSPIRE Reference
Platform (ARE3NA)

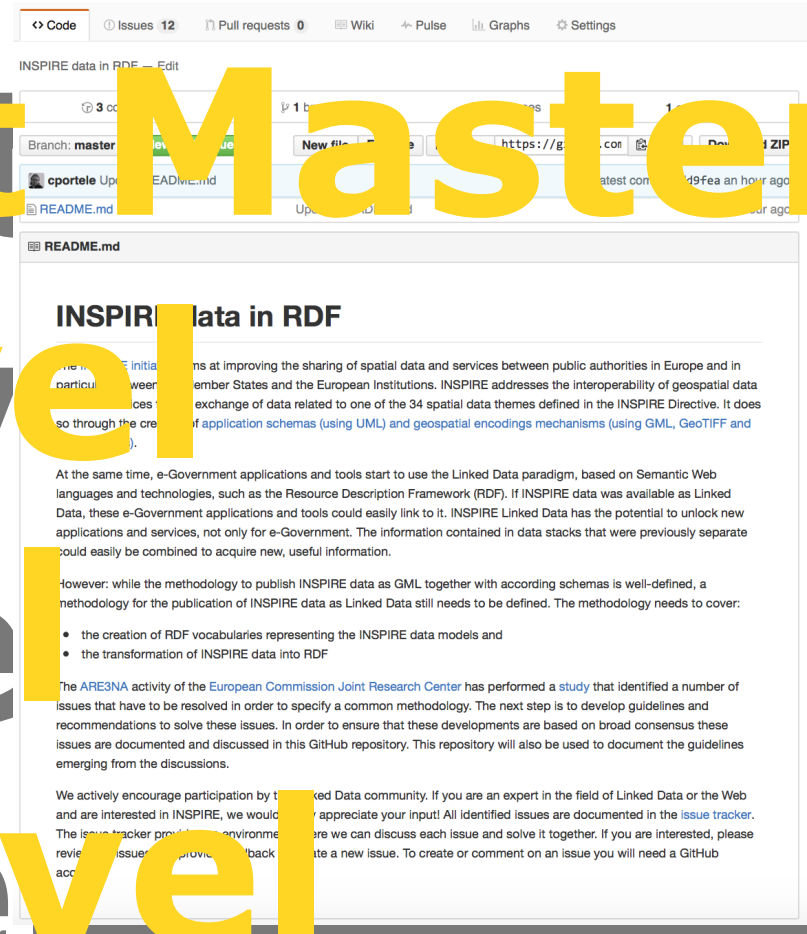
Study on RDF and PIDs for INSPIRE
Deliverable D.TD.03

**Guidelines on methodologies for the creation of
RDF vocabularies representing the INSPIRE data
models and the transformation of INSPIRE data
into RDF**

Diederik Tirry
Danny Vandenbroucke
Robin S. Smith
Michael Lutz

Feedback on open issues on GitHub

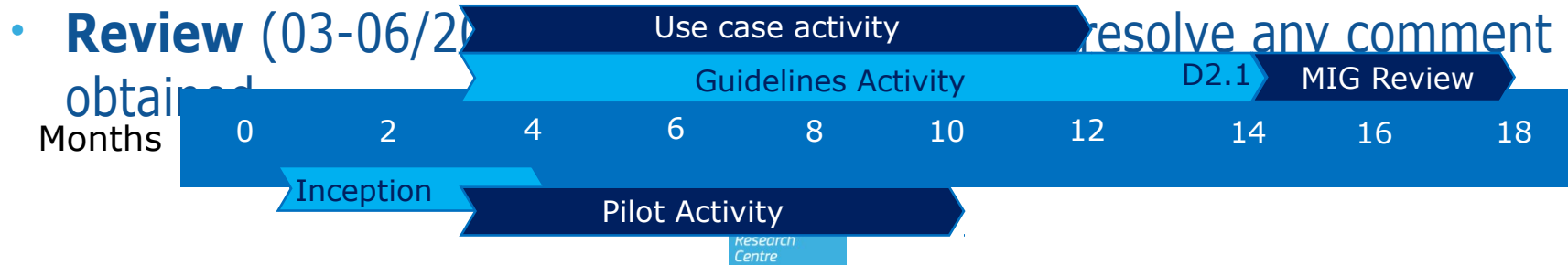
- GitHub repository for discussing and resolving open issues
- Starting point: known open issues incl. a proposal for resurrounding
- Comments and ideas from stakeholders and experts working on related activities will become
- Also the emerging guidelines and proposed INSPIRE RDF vocabularies will be documented in the repository



<https://github.com/inspire-eu-rdf/inspire-rdf-guidelines>

Timeline

- **Inception** activity (01-04/2016): definition of the forum, pilot selection
- **Pilot** activity (03-10/2016): scoping, support pilot participants and monitoring
- **Guideline** activity: document known open issues on GitHub (01-02/2016), resolve open issues, create and test RDF vocabularies in pilots, document guidelines, engage with experts and stakeholders (02-12/2016), test INSPIRE as Linked Data in Pilots (02-09/2016), Review of draft guidelines by INSPIRE MIG (02-05/2017)
- **User Case** activity (03-12/2016): use case identification



Get involved!

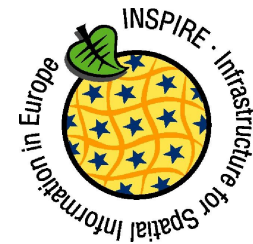
- Propose pilots



- Comment on GitHub



- Connect to your MIG-T representative



- Send feedback on “food for thought” to are3na@jrc.ec.europa.eu
(or talk to us during the lunch break)



Food for thought...

- Do we really need this?
- Do we need it for all of INSPIRE?
- Where do the real benefits lie (for whom)?
- Do we need to change our SOA architecture?

